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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,305	06/24/2003	Wendelin J. Stark	0796/67688	8278

7590

01/05/2006

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EXAMINER

VANOY, TIMOTHY C

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,305

Applicant(s)

STARK ET AL.

Examiner

Timothy C. Vanoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-27 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-19 (group I), drawn to a method for producing a metal oxide and metal oxides, classified in class 423, subclass 592.1+.
- II. Claims 20-24 (group II), drawn to a catalyst, classified in class 502, subclass 300+.
- III. Claim 25 (group III), drawn to a method for treating the exhaust gas from an internal combustion engine(?), classified in class 423, subclass 213.2+.
- IV. Claim 26 (group IV), drawn to a method for mechano-chemical polishing, classified in class 451, subclass 28+.
- Va. Claim 27, drawn to the use of metal oxides in heterogeneous catalysts, classified in class 502, subclass 100+.
- Vb. Claim 27 drawn to the use of metal oxides as structural ceramics, classified in class 501, subclass 1+.
- Vc. Claim 27 drawn to the use of metal oxides as battery storage materials, classified in class 429, subclass 149+.
- Vd. Claim 27 drawn to the use of metal oxides in chemical sensors, classified in class 422, subclass 50+.
- Ve. Claim 27 drawn to the use of metal oxides as elements in energy production, classified in class 429, subclass 50+.
- Vf. Claim 27 drawn to the use of metal oxides in solar energy production elements, classified in class 136, subclass 243+.

- Vg Claim 27 drawn to the use of metal oxides for electron storage in recyclable battery units, classified in class 429, subclass 149+
- Vh Claim 27 drawn to the use of metal oxides in dielectrics, classified in class 219, subclass 746+.
- Vi Claim 27 drawn to the use of metal oxides in ferroelectrics, classified in class 136, subclass 254+.
- Vj Claim 27 drawn to the use of metal oxides in gas permeable membranes, classified in class 96, subclass 4+.
- Vk Claim 27 drawn to the use of metal oxides in pigments, classified in class 106, subclass 400+.
- Vi Claim 27 drawn to the use of metal oxides as polymer additives, classified in class 106, subclass 901+.
- Vm Claim 27 drawn to the use of metal oxides as stabilizers, classified in an unknown class and an unknown subclass (insufficient information is given to classify this method).
- Vn Claim 27 drawn to the use of metal oxides in magnetic fluids, classified in class 252, subclass 62.51R.
- Vo Claim 27 drawn to the use of metal oxides in polishing powders, classified in class 106, subclass 3+.
- Vp Claim 27 drawn to the use of metal oxides as additives in metal alloys, classified in class 420, subclass 591+.

- Vq Claim 27 drawn to the use of metal oxides for armor fabrication, classified in class 89, subclass 36.01+.
- Vr Claim 27 drawn to the use of metal oxides in microelectronics, classified in an unknown class and an unknown subclass (insufficient information is given to classify this method).
- Vs Claim 27 drawn to the use of metal oxides in electrodes, classified in class 429, subclass 209+.
- Vt Claim 27 drawn to the use of metal oxides as phosphors for radiation sensitive elements and in displays, classified in class 252, subclass 301.6R.
- Vu Claim 27 drawn to the use of metal oxides in cosmetics, classified in class 514, subclass 844+.
- Vv Claim 27 drawn to the use of metal oxides in pharmaceutical packaging, classified in class 206, subclass 819+.
- Vw Claim 27 drawn to the use of metal oxides as an additive for food and pharmaceutical applications, classified in class 426, subclass 321+.
- Vx Claim 27 drawn to the use of metal oxides in fuel cells, classified in class 429, subclass 12+.
- Vy Claim 27 drawn to the use of metal oxides in superconductors, classified in class 505, subclass 100+.

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The inventions are distinct, each from the other, because of the following reasons:

The inventions set forth in claims 1-19 (group I), claims 20-24 (group II), claim 25 (group III), claim 26 (group IV) and claim 27 (groups Va through Vy) are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because each group of claims is capable of supporting its own patent. The subcombination has separate utility. For example, the utility of the method of claim 25 is for treating the exhaust gas emitted from a combustion engine, which is separate from the utility of the method of claim 26 which is for mechano-chemical polishing, which is separate from the various utilities set forth in claim 27 which may be for battery storage materials which is separate from the utility of the catalyst set forth in claims 20-24 which may possibly be used for catalytically destroying hydrocarbon-based chemical warfare agents.

Because these inventions are distinct for the reasons given above and the claims set forth in the various groups have acquired a separate status in the art as shown by their different classification, the search required for any selected group of claims is not required for the other non-selected groups of claims, and the claims set forth in the

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various groups have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

The applicants are advised that in order for their reply to this requirement to be considered complete, it must include an election of the invention to be examined - even though the requirement may be traversed (37 CFR 1.143).

The applicants are also advised that if they elect one of the multitude of different methods set forth in claim 27, then they will also be required to amend claim 27 to limit it to that single elected method and eliminate the other non-elected methods from claim 27.

The applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy C Vanoy
Timothy C Vanoy
Patent Examiner
Art Unit 1754

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